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NEW FACTS RESPECTING MARY QUEEN OF SCOTS.

A RUSSIAN noble, Prince Labanoff, has devoted fourteen years to the collection of documents respecting Mary Queen of Scots, including her own letters, and the communications of her ambassadors, and the result of his labours has just appeared in seven goodly octavos. The degree of originality pertaining to this publication may be partly estimated from the fact, that it presents four hundred of the queen's own letters, hitherto unknown to the public. The most remarkable feature of the work is its tendency to clear Mary's name of much of the reproach that has hitherto rested upon it, and to add to the likelihood which formerly an acute, and at the same time impartial person, might have apprehended, that the common view of this lady's character is in a great measure a piece of party fiction. We propose here to run over a few of the new matters which combine in Prince Labanoff's collection to this effect, not with any design to consider the question critically, which indeed in our short space would be a vain attempt, but merely to help a little towards the gratification of the public curiosity on a point which will be adverted to in many quarters where the perusal of the entire book is unattainable.

What appears most broadly and strikingly in this collection is, the zeal and firmness of Mary in her religion. From first to last—as the queen of two states, and as a hopeless captive in a foreign land—she maintains but one tone as a sincere Catholic, ready alike to use power when she has it, and when she has not, to sacrifice her life, for the restoration of that form of faith in her own country and in England. It appears that, at the close of her life, having no hope of her son siding with the Catholic party, and having been heartlessly deserted by him, she bequeathed all her interest in the English succession to Philip II. of Spain; an impotent act of course, but showing will. Seeing this determination of her mind, and remembering the atrocious acts done in those days for the objects cherished by her—and by none were more wicked deeds done than by her own uncles of the house of Guise—we are not to wonder that she should have had so little friendship from the partisans of the opposite faith, or that men of their stamp in such an age should have been governed by no nice scruples in their conduct towards her. It is not our part, however, to regard the motives or objects of parties: we are called on solely to consider their acts, to ascertain what these truly were, and to judge of them according to the abiding and universal rules of justice.

The more controverted part of Mary's life commences with her marriage to Lord Darnley in 1565. It now clearly appears that she was led to marriage at this time against her will, and as a measure of political

expediency; and that she chose Darnley from no personal preference, no romantic attachment, as has been thought, but because he was a Stuart, next to herself in the English succession, and, as a Catholic, agreeable to that section of her subjects which she was most anxious to gratify. One powerful consideration in this marriage was its enabling her to bear her part against the machinations of her natural brother, the Earl of Murray, whose ambition it was to be in one shape or another the actual ruler of Scotland. The marriage was disappointing to Murray and to Elizabeth; and the former, with the secret aid of the latter, immediately raised a rebellion against his sister. Defeated by Mary and the faithful part of her subjects, he fled to the English court, where he received protection. The concern which Randolph, the English resident at Edinburgh, had in Murray's rebellion, is shown in a letter of Mary to her English ambassador, Robert Melville, now published for the first time: 'Melville,' she says, 'it is not unknown to you how, before your departing, we had granted our pardon to John Johnstown, who coming home, and this same day being before us, we inquired of him the cause of his departing. He answered, that in the middle of August last he was sent for by Master Randolph to come and speak with him at his lodging, at David Forrester's, whither he came; and after some declaration made to him by Mr Randolph, how he was my Lord of Murray's servant, and one whom he would specially trust, Master Randolph delivered to him three sacks of money sealed, wherein was contained (as was said) three thousand crowns, which he, at Randolph's desire, conveyed to St Andrews, and delivered the same to my Lady Murray, receiving her receipt for it, which he carried back to Randolph. And fearing that the matter might be discovered, he (Johnstown) durst not remain, but departed. And at the very time that we were receiving this declaration, Mr Randolph happening to be present with our council discussing matters relating to the borders, we thought it not inconvenient to report to him the report made to us, and show him plainly that in consideration the queen, our good sister, his mistress, had not only to our dearest brother, the king of France, and to his ambassador resident there, but also to Monsieur Ramboletz, his late ambassador here, and by Randolph to ourselves declared, that she had neither aided, nor was willing to aid and support our rebels with men, money, or otherwise, to our displeasure; which we take to be undoubtedly true, and will look for no other at her hands; such account do we make of her and her declaration, given in that behalf, which we can in no wise mistrust. Yet that he, her servant and minister, occupying a peaceable charge, contrary to her will and meaning, should undertake a thing so prejudicial to the peace, we could not but think very strange of it, and had right good occasion to be offended

with his misbehaviour, that within our own realm had comforted them with money to our displeasure, who were our rebels, and with whom we had just cause to be offended.* Randolph, she adds, first denied the charge, but when evidence was brought against him, he stood at bay, and announced that he held himself as only answerable for his conduct to his own mistress. The crookedness of policy thus shown in Mary's enemies contrasts strongly with her implicit, unsuspecting faith in the good feeling and conscientiousness of Elizabeth.

The documents here adduced respecting the murder of Ricio, make clear the motives of the various parties; Darnley having none besides his wish to secure the crown matrimonial, in which the poor Italian had opposed him. Randolph wrote at the time to Cecil a scandalous letter impeaching the queen's honour. His credibility as a witness against her so soon after she had convicted him of the basest duplicity, might be safely left to impartial consideration; but it is well to know that, from the various documents now brought forward, there cannot remain the slightest shade of suspicion against Mary on this score. The assassination of Ricio, over and above the personal motive of Darnley, was a Protestant move necessary to turn affairs at the Scottish court, so as to allow of Murray and his friends being pardoned for their rebellion. It was, in the sixteenth century, what a change of ministry through a vote in the House of Commons is at the present day. The religious feelings of that time, so far from forbidding, stimulated such barbarities.

The whole behaviour of Darnley from this time was such as to alienate the affections of the queen. He seems to have been an utter fool, with all the qualities of intractableness and waywardness which that term implies. Yet all the evidence that appears represents Mary as submitting to his follies with patience. In November 1566, four months after the birth of her son, her principal lords—Murray, Bothwell, Huntley, Argyle, and Maitland of Lethington—came formally to her at Craigmillar, to propose that she should divorce Darnley; but she told them that she would abide the will of Providence to be relieved from her present sufferings, and positively refused to go into the scheme. One reason for this resolution on Mary's part may have been of a political nature. In her communications at this time with Elizabeth, it is evident that her predominant aim was to secure her being declared the heir-presumptive of the English throne. It might seem to her that the English people were not the more likely to favour her hopes, if they saw her engaged in suing a divorce from her husband, not only from a consideration of the indecorum which always attends such an act, but because it lessened her prospect of heirs of her own body. Within a month of the death of Darnley, namely, on the 13th January 1567, she is found writing a complaisant letter to Elizabeth, urging her pretensions to be declared the heir of the English crown. 'Always,' she says, 'have we commended us and the equity of our cause to you, and have certainly looked for your friendship therein; whereon we have continually trusted; and now we think us fully assured of the same, having thereof so large proof by knowledge of your good mind and entire affection, declared by your said ambassador, as also by our servant Robert Melville; not doubting but in time convenient you will proceed to the perfecting and consummation of that which you have begun to utter, as well to your own people as to other nations, the opinion you have of the equity of our cause and your affection toward us; and namely, in the examining of the will supposed to be made by the king your father, which some would lay as a bar in our way; according to your own promise to us, as well contained in your letter sent by our servant Robert Melville, whereof he has made us report that you would proceed therein before your

nobility (being at this present assembly) departed towards their own houses.' At the date of this letter, Darnley was sick of small-pox. Immediately after, Mary was informed of a plot which he was alleged to have formed for seizing the infant prince, and getting himself made regent in his name. Even while having such grounds of suspicion against him, she is found writing to her ambassador in France, the Archbishop of Glasgow—'Always we perceive him occupied and busy enough to have inquisition of our doings; which, God willing, shall always be such as none shall have occasion to be offended with them, or to report of us any way but honourably; howsoever he, his father, and their favourers speak, who we know want no good will to give us trouble, if their power equalled their inclinations.' It need hardly be asked, if a person with such reasons for standing well with the world, and who gives such incontestable evidence of her having been alive to those reasons, was at all likely to be engaged in a conspiracy for the murder of her husband? an event which, whether she had any concern in it or not, could not but be damaging to her immediate affairs, as well as her prospects.

A letter of Mary to the Archbishop of Glasgow, written the morning after the murder of Darnley, advertens to some information he had communicated to her as to designs against herself; and she expresses her belief that the explosion of the house was designed for herself likewise, as she had slept in it three out of the seven preceding days, and was only prevented from sleeping in it that night by the chance of having had to attend a masque at Holyroodhouse. Bothwell, the actual murderer, now comes prominently forward. The common supposition is, that Mary favoured his escape from the trial to which he was subjected at the instance of Darnley's father. It appears that he was in reality protected by a confederation of nobles, amongst whom were those who soon afterwards deposed the queen. These men now associated in a bond for the purpose of procuring a marriage between Mary and this atrocious member of their corps. And it is remarkable of this association that its leader, Morton, had been concerned in the murder of Darnley. That the queen had any inclination to the proposed match, there is not a particle of sound evidence; for the celebrated letters afterwards produced in a casket are manifestly a base and clumsy forgery. That it was, on religious grounds, objectionable to Mary, is indubitable, for Bothwell was a Protestant. See, then, the actual progress of events. Bothwell, armed with the bond favouring his suit of Mary's hand, seized her person as she was travelling from Stirling to Edinburgh, and immediately conducted her to his castle of Dunbar, where she was kept a prisoner for several days. Let it be remembered that, at that time, there was no standing army, not even a regiment of guards, to support the head of the government in Scotland. Mary depended, for the means of maintaining her place and function, upon the good-will of the nobility. Is it surprising that, sinking under this indignity, to which her chief nobles appeared to have conspired, she should have been induced, for the sake of her reputation as a woman, as well as for maintaining her place as a queen, to consent to the odious match which was soon after carried into effect? And can we have any doubt of the real views of Morton and his confederates in promoting the marriage, when we find them immediately after taking advantage of the infamy which it produced, to raise the standard of revolt against her, and in brief space effecting her dethronement? In the whole series of proceedings, Mary appears as the victim of force. At the marriage, she was habited in deep mourning. The state of her feelings on the evening of the day of the nuptials, is evinced by De Croc, the French ambassador, who visited her at her own request. 'I perceived,' says he, 'a strange formality between her and her husband, which she begged me to excuse, saying that if I saw her and it was because she did not wish to be happy, as she said she never could be, wishing only for death. Yesterday,' he adds, 'being all alone in a

* For the translation of this and some of the ensuing extracts from the queen's correspondence, we are indebted to the Athenæum.

closet with the Earl of Bothwell, she called aloud for them to give her a knife to kill herself with. Those who were in the room adjoining the closet heard her.* There is also evidence of Bothwell regarding her as a person requiring to be watched, that he might work out his ends successfully. In her own communication to the French court respecting the marriage, she speaks as follows:—'When he saw us like to reject all his suit and offers, in the end he showed us how far he had proceeded with our whole nobility and principals of our estates, and what they had promised him under their own handwriting. If we had cause, then, to be astonished, we remit us to the judgment of the king, the queen, and others our friends. Seeing ourself in his power, sequestered from the company of our servants and others of whom we might ask counsel; yea, seeing them upon whose counsel and fidelity we had before depended, whose force ought and must maintain our authority, without whom in a manner we are nothing, beforehand already won over to his wishes, and so we left alone as it were a prey unto him; many things we resolved with ourself, but could never find a way of escape. And yet gave he us little space to meditate with ourself, ever pressing us with continual and importunate suit.' It may be asked if this is the language in which she could have been expected to write to a friendly potentate respecting a husband whom she had married under the influence of an infatuated passion, as represented by her enemies. In short, while there is no worthy evidence of any love on Mary's part towards Bothwell, or of a single motive of another kind which she could have for such a marriage; while, on the contrary, it was, as the event proved, likely to be most injurious to her; there is abundant evidence of the affair having sprung from the ambition of this profligate man, and been effected by the assistance of a set of his accomplices, who saw in this step a sure means of effecting an object long desired by them—the destruction of a ruler opposed to them in faith, and whose continuance in power was dangerous to the Protestant cause. In five weeks from the marriage these men had immured the queen in Lochleven, while Bothwell was an outlaw roaming through the northern seas.

The whole subsequent conduct of Mary respecting Bothwell is accordant with the supposition of the marriage having been contrary to her will. She parted with him at Carberry without a sigh. In her letters after that event, she is not found alluding to him. That she declined a proposed divorce the month after their parting, may be considered as owing to her having been pregnant of a daughter, now ascertained to have been born at Lochleven, and who died a nun in France. The trial got up between Elizabeth and the Scotch lords, during her imprisonment in England, with a view to establish her guilt, ended, as is well known, in a complete failure. But the crowning evidence on the exculpatory side is in the circumstances connected with the death of Bothwell. This wretched man perished in a Danish prison ten years after his fall. Mary then wrote as follows to the Archbishop of Glasgow:—'Information has been received here of the death of the Earl of Bothwell, and that before his decease he made an ample confession of his crime, and declared himself the guilty author of the assassination of the late king, my husband, of which he expressly acquitted me, testifying to my innocence on the peril of his soul's damnation; and since, if this be true, this testimony would be of the greatest value to me against the false calumnies of my enemies, I beg of you to investigate the truth by all the means possible. Those who were present at this declaration, which was afterwards signed and sealed by them in the form of a last will and testament, are Otto Braw, of the castle of Elcembro; Paris Braw, of the castle of Yacut; Mr Gullunastame, of the castle of Fulkenster; the Bishop of Skonen,

and four magistrates of that town. If De Monceaux, who has formerly trafficked in that country, would make a voyage thither to inquire more particularly, I would be glad to employ him for the purpose, and to furnish money for his travelling expenses.' Now this document, which Mary wished to be produced, was sent to Elizabeth, but by her suppressed. Morton, who was now regent in Scotland, is at the same time found imprisoning a man for spreading a report of the existence of such a document. Prince Labanoff has, however, obtained an original and undoubted copy of Bothwell's declaration, showing that the account which Mary had heard of it was correct. A man in Bothwell's circumstances could have no motive to clear the character of Mary, if she had actually been guilty. The publication of this important document is deferred by the prince till he shall give us an eighth and final volume, stating his own impressions from the interesting series of papers contained in the seven already published.

Such are the leading points of the evidence now brought out in favour of the innocence of Mary. It is an evidence which will not be satisfactory to the sectarian spirit still alive respecting the history of her times; but to minds independent of that influence, it will carry much weight. The wonder with candid persons will now be, that they did not long ago suspect the soundness of the prevalent views respecting Mary, seeing that she was exactly in those circumstances which make fair treatment next to impossible. All monarchs succeeded by new and hostile dynasties, all statesmen and all political ideas superseded by others of an opposite stamp, are sure to be misrepresented. Knowing these things, it appears strange that we did not long since suspect the vulgar history of Queen Mary, merely from the circumstance that the representatives of opposite religious and political systems had been in possession of power ever since her time. We might have been startled, if by nothing else, by reflecting that Mary is held infamous on a merely suspected connexion with the crime of murder, while Elizabeth, who is known for certain to have taken measures to have Mary assassinated, who called Sir A. Pawlett a precise fellow, because he would not do the deed, and who actually did murder Mary under form of law, is handed down as a paragon of excellence. The impartial public has been deficient in shrewdness, but we trust it will not be deficient in manfulness to express its sense of the new bearing of this question.

FARMING PAST AND PRESENT.

Nothing could be more erroneous than the attempt which is sometimes made to draw a line of distinction between the principle of raising food and the production of wares in wool, in linen, in wood, or in iron. The one is about as much a manufacture as the other; a trading with capital, an endeavour to accumulate profits, from the supply of a marketable commodity, in the shortest time, and by the cheapest process. It is true that at one time a wider difference existed between the culture of the soil and those arts which are usually termed manufactures; but that period has long since passed, and the two great branches of industry are every day more closely approximating. The farmer—we speak more particularly of Scotland—no longer builds his own sheds, makes his own harness, or fashions the implements by which he prepares the soil, but calls in the assistance of the mason, the joiner, mechanist, and chemist, himself taking only the last division of the labour by which the commodity is produced. Thus it is that farming, as a branch of industry, differs in no respect from cotton weaving: it is an art, to the perfection of which other arts must contribute their share; its demands upon their aid becoming numerous in proportion to the demands upon its produce. Nothing could be more conclusive of this view than a contrast between the realities of British farming in 1845, and those which existed sixty or eighty years ago.

* Translation in W. Turnbull's edition of *Letters of Mary Stuart*. Dolman: 1845.

Let us take, in the first place, the erections of the farmstead, as these in every case must form the first step towards an establishment. At the period to which we refer these were little better than mud-huts, being constructed of turf, or of alternate layers of turf and stone, and covered with straw, heath, or rushes. There might be some small necessity for carpentry in the framing of the roof or door, but otherwise the whole could be accomplished by the hands on the farm. Now, a first-rate Scottish farmstead will cost several thousand pounds, requiring the joint labour of the architect, builder, joiner, slater, plumber, and ironsmith. The walls are of well-worked stone, the woodwork usually of foreign timber, thereby calling in the assistance of the timber-merchant and ship-owner, and the slates or tiles also imply the work of another class of artisans. Indeed, a well-appointed farmstead, with all its offices, its water-pipes, liquid manure-tanks, boiling and steaming apparatus, sicing, chopping, and thrashing machines, requires in every respect as great a variety of labour and mechanical skill as does the erection of any other factory. Or let us look at the interior of the buildings, and compare the rough rude finish of a century ago with the finely-paved, plastered, and partitioned stalls of the present day. Then, the cow-houses and stables were dark, dingy, ill-cleaned hovels; now, they are lighted and ventilated, and their inmates fed and curried with a care exceeding that—we are ashamed to own it—which some would grudge to bestow on their peasantry. In the mere erections of a farm, therefore, there is scarcely a point in common between the two periods; no comparison between the frail hovel of turf and straw, and the substantial structure calculated to endure for centuries. We never look, in fact, from the top of the passing coach at a farmstead, with its symmetrical lines of elegant architecture and its tall chimney-stalk, but we feel we have a factory before us, as much as if a spinning-mill or iron-foundry formed the prospect.

Again, in directing our attention to the soil, either as regards the amount under culture, or the style of cultivation, nothing could be more strikingly different. Eighty years ago, only a few fields around the homestead came under the plough, the rest were left in rough pasture, heather, or furze, as laid down by the hand of nature. Nothing could be more truly primitive than the agriculture of our grandfathers. Fences were few, and these of turf or dry stones; hedges and beltings of wood were only coming into fashion round the mansions of the proprietors. Draining was unknown; the dry knolls and slopes alone were tilled; the meadows were left for hay; any spring or superabundance of water on ploughed land was led off by an open furrow, to expend itself in the next lower level; trenching was never thought of; and altogether, culture, in the literal acceptance of the term, was of the most imperfect description. Nor were the crops aimed at anything beyond what might have been expected from such a style of cultivation. Oats, peas, barley or bigg, and an attempt at wheat on some of the better lands, may be said to have constituted the whole agricultural produce of Scotland; for potatoes were merely known as a novelty, and turnips, beet-root, carrots, the artificial grasses, and other green crops, were heard of only as things peculiar to more favoured climates. At present, what is the state of matters, at least in the more available districts? Every acre that the plough and spade can reach is under culture; substantial fences of stone and lime, hedgerows and ornamental paling, are things quite common; and beltings and clumps of wood are thickly scattered over the face of the country, alike for shelter and ornament. Draining and trenching are working wonders on the soil and climate; every rough place is made smooth; the furze, heath, and broom are supplanted by crops of grain; and bogs and morasses are converted into fertile fields. Crops that our forefathers never could have dreamed of, are now reared luxuriantly under the climate of Scotland, creating a total revolution both in our style of living and in

the capabilities of the country as to population. Wheat and potatoes may be said to be the staple support of the populace; turnips, beet-root, and the artificial grasses, are the basis of that enormous amount of butcher-meat which is now consumed; oats and barley are now subordinate articles of food. By this high advancement the rental of the land has in some cases been trebled; the farmer is compelled to seek from every square yard its produce; and owing to the equality to which he has brought it by modern skill, he can calculate upon its capabilities with about as much certainty as the engineer can calculate the power of his steam engine, or the printer the number of sheets which his machine will throw off in a given time.

This high state of cultivation could not, however, have been brought about except by improved implements and machinery—without, in fact, the aid of the mechanic, engineer, chemist, and naturalist. Eighty years ago, a few spades and mattocks, rude wooden ploughs and harrows, a wain or two of wicker or of boards, some pack-saddles and rope harness, a flail and a set of winnowing riddles, constituted the sum total of a farmer's mechanical outfit: now, how different is the picture! His ploughs are of iron, and fashioned upon scientific principles as to draught, width and depth of furrow; and we have at this moment upwards of a score of models before us, each laying claim to some advantage as to draught, drilling, subsoiling, trenching, or even to draining, for this process can now be executed by the plough alone. Nay, we have seen the *steam* plough at work, and have faith in the prediction that, as the surface of the country becomes more easy and regular under the present systems of culture, this gigantic machine will come into very general operation. As with the plough so with the harrow; the wooden implement has been superseded by one of iron, and by other instruments of the same family, as the grubber, the scarifier, the horse-shoe, &c. each being applicable to some special purpose. The clodpole and mallet, which were applied to the refractory glebe of former years, have generally given way to rollers of various kinds; and the hand that used to scatter the seed broadcast, has in many cases only to tend a machine that will do the work with a precision, regularity, and economy, setting the human instrument at defiance. We often wonder what would be the surprise of a departed grand-uncle, who was wont to sow his little acre of turnip by shaking a bottle of seed along the drills, the discharge being regulated by a bit of perforated paper tied over the mouth of the vessel, were he to revisit the world, and see a first-rate turnip machine taking four drills at once, and not only sowing and covering the seed, but dropping and earthing the manure at the same time. Nothing certainly could more excite his simple wonder; and yet the turnip-sowing machine is but one of a hundred similar inventions, all calculated to lessen the sum of rural labour. In former times, the mechanical skill of the country joiner and blacksmith was quite sufficient for the wants of the farmer; nay, these men were mere labourers, fashioning the material which he usually supplied. Now, the system is totally revolutionised: we have the 'agricultural implement maker,' as a distinct profession, dwelling in cities, possessing large capital, and employing draughtsmen, joiners, turners, engineers, and braziers. New inventions are rising into notice every day; patents are rife; and few of our large towns but have museums, in which the results are displayed for the study of the agriculturist.

It would be fruitless to attempt an enumeration of modern agricultural implements and inventions, and yet there are two or three which cannot be omitted in a contrast like the present. In the matter of vehicles and their outfits, nothing could be more widely dissimilar than the attainments of the two periods. For want of good roads, pack-saddles were more numerous than wains or cars; and wains were rude sledges, dragged slowly along by oxen. The harness of the

cattle—whether horses or oxen—was generally made at by-hours by the ploughmen or farmer himself, and consisted of an assortment of straw or tow-ropes, wooden frames, and thongs of untanned skins. Now, the carts and wagons are of light and elegant construction, requiring the labour of a special class of artisans; and nothing could be more complete than the harness of the saddler, which calls in the skill of the tanner and currier, and the art of the brazier and silversmith. Could we recall the shaggy farm-horse of 1745, with his rude furniture, and place him alongside of the sleek stately animal of the present day, caparisoned in his elegant harness, the contrast would be as decidedly startling as that between the savage in his tattered blanket and the well-dressed gentleman. Again, if we compare the simple flail of our ancestors with the improved steam thrashing-mill of the present day, we shall find a difference even more astonishing. Sixty years ago, the ploughman prepared two rods of well-dried ash, pierced an eye in each, connected them by a free hinge of cord or dried eel-skin, and this constituted the flail, the only thrashing implement till a recent period which Britain could boast of. Slow, tedious, and expensive, this implement could no more have met our present requirements than could the spinning-wheel of our grandmothers. The thrashing-machine took its place, at first small and imperfect, but now on many farms a complete instrument—moved by steam, and not only thrashing out the grain, but winnowing it, dressing it, and sacking it quite ready for the market. The farmer need never unyoke his horses from their ordinary field-work, so far as thrashing is concerned; he has only to light his furnace in the morning, by breakfast the steam is up, and before dinner as much grain is thrashed, cleaned, and ready for sale, as a dozen flail-men could have prepared in a month. In fact, the thrashing-mill is one of the most obvious applications of mechanical skill to the manufacture of human food, and quite as perfect in its results as is the spinning-mill or power-loom.

It is not, however, in the mere substitution of ingenious and powerful machinery for implements simple and imperfect that agriculture is approximating more and more to the condition of a manufacture; there are inventions and appliances totally new which bear equally on this view of the matter. Take, for example, the subject of draining. The excavations are not now filled merely with stones gathered from the land or dug from the quarry, but are fitted with tiles and pipes of clay, concrete, and other substances. Nor are these tiles fashioned slowly by the hand, but are pressed and moulded into form by machines with a precision and rapidity that enables the farmer to lay down drains not by feet and yards but by miles. Or turn we to the subject of manure, the last and least thought of by our forefathers, who allowed their dung-heaps to run to waste, exposed to the sun and rain, as things of secondary importance. On this point the physiologist and chemist have created a sudden and total change of opinion, and every scrap of farm manure, and every drop of animal liquid, is now collected and preserved with as great care as is the grain that is reaped and thrashed. Not only are dung-pits and liquid manure-tanks built and carefully excluded from the causes of evaporation, but chemical substances are applied to fix the volatile principles, and an immense amount of labour bestowed in the proper preparation of the farm-yard manure. Nay, farther, bones are sought in every quarter, gathered at home, and shipped from abroad, to be crushed for manure; the droppings of sea-birds, under the name of guano, are imported from the rocky islets of Peru and South Africa at many pounds per ton, thus making the meanest of all substances the subject of the most profitable commerce. Nor does the supply of manure end here: the chemist has determined the substances entering into the composition of the various crops; he knows also the constitution of the soil, and can therefore supply to it the elements which the intended crop

shall most require. Thus we have dozens of artificial manures invented, prepared, and patented by the ablest chemists of modern times—again confirming the proposition with which we set out, that in every particular agriculture is more and more approximating to our ideas of a manufacture.

As yet we have said nothing respecting the condition of the farmer as influenced by this rapid advancement; but our comparison would be partial and imperfect without some allusion to the vast change which it has effected in this particular. Formerly, the farmhouse was a humble single-storeyed tenement, with two or three apartments at most, and these but very indifferently furnished; the walls were roughly plastered; there was either no ceiling, or one formed of boards and matting; and in a majority of instances, the floors were earthen. The dairy and poultry were either managed under the same roof, or in adjoining sheds; and the house being situated in the same range or square with the byres and stables, afforded anything but a facility for order and cleanliness. Now, how different is the arrangement! It is only the other day that we visited a Fifeshire farm, and found the dwelling-house rivaling the handsomest of our suburban villas in style and comfort. Embosomed in shrubbery, possessing a suite of public and private rooms, and having the kitchen, scullery, and dairy arranged behind, and screened from view with admirable taste, it was a mansion that might have accommodated a nobleman. Nor is this a solitary instance, for we could point to hundreds of such in the lowland counties, where eighty years ago there was nothing superior to a modern roadside cottage. Then, too, the farmer, dressed plainly in homespun woollen, toiled with his labourers, sat, and generally mealled with them in the kitchen, and altogether led a simple life, little exalted above that of his hands. His sons took their regular share of out-door labour, his wife and daughters attended to the kitchen, spun, managed the poultry and dairy, and were generally the first on the harvest-field. Now, the farmer and his family dress expensively; his duty is to conduct, not to labour with his own hands; he never mingles with his servants unless to direct; his sons are beginning to be educated in those sciences necessary to the perfection of their art; his daughters are taught every accomplishment of modern education, take no share in the labour of the farm, and only attend to such household duties as devolve upon ladies in town. The farmer keeps his thoroughbred horse, or drives his own curricle; attends market as a merchant does the Exchange; transacts his business not as of old with the consumer, but with the cornfactor, thereby saving time, and avoiding expense and trouble. Nay, so perfect is his system of marketing, that, like the clothier and tea-merchant, he can send his samples, his note of weights and prices, and can thus secure every advantage of market without leaving the duties of his farm for a moment. All this speaks of high professional attainment, and betokens an improvement still greater than we can form any idea of, once the physiologist and chemist have made their deductions to bear more directly upon the science of agriculture.

We turn in conclusion to the condition of the farm labourer, the hind, the peasant, the cottager, or by whatever other name the rural section of our population is known. Here we must confess that the picture is not so cheering: this vast improvement in agriculture has told but faintly in comparison on his position, the while it has tended to separate him immeasurably from his employer. The cotton lord who lives in his suburban palace, lolls in his carriage, and dines off silver, is not farther removed from the poor girl who stands at one of his spinning frames, than are some of our modern farmers from the hind that ploughs the soil. This seems to be an inevitable effect of the accumulation of capital, and it were indeed a cheerless and staggering one, had we not faith in human progress towards a condition of less toil and greater comfort. It

must not, however, be supposed that all this recent advance in agriculture has left the labourer in his position of eighty years ago. The draining and trenching of the soil have rendered it dry and smooth, and he treads over it more lightly; he has less of rheumatism, and never suffers from ague; machinery has removed in a great degree the necessity of long-continued work and heavy lifts; he is better clothed, and more regularly fed; and on well-managed estates, has a neat and comfortable cottage to dwell in. As improvements proceed, so will his condition be farther improved; every additional appropriation of machinery will lessen his manual labour; and the general advancement of the country will put in his, as in other men's possession, the little luxuries of food and clothing which are so essential to our ideas of comfort. Intellectually, too, he is a superior being; he enjoys a greater amount of freedom; and the experience he has acquired from moving amid so much improvement and machinery, has fitted him to enter upon other pursuits with greater chance of success than he could possibly have done during the primitive ignorance of a century ago. These are great advantages certainly; and though they do not place the labourer in the proximity to the farmer that existed in former times, still they ought to be regarded as a lengthening of that lever which men, with proper attention, and care, and self-respect, may apply to their own elevation.

Altogether, therefore, it would seem that agriculture, though somewhat later in taking the start, is not in any degree behind the general advance of other industrial pursuits; and that it is every day more closely approximating to them in its modes of operation, in its requirements, and in its results.

BENONI'S MOURNING.

BY FRANCES BROWN.

In the five thousand five hundred and fifty-fifth year of the world, Rabbi Benjamin Benoni, chief doctor of the dispersed of Israel, dwelling in the Gentile city of Granada, made a vow to fast and mourn two days at every full moon for the sins and iniquities of his household.

Rabbi Benjamin Benoni was learned in all the wisdom of the Talmud. He knew to a hair's-breadth how near a Gentile might be approached without pollution, and had written three folio volumes on the proper posture for eating the passover; but the principal exploit of his life was the refutation, in public controversy, of the doctrine maintained by Rabbi Joseph Benjamin Joshua, of Malaga, that it was lawful for a Jew to lift a pin which he saw at his feet on the Sabbath day, which raised his reputation for knowledge and piety to such a height among the Jews of Spain, that they sought his advice and assistance in all difficult cases of conscience, and called him the Solomon of the dispersed. Nor was the rabbi esteemed less righteous than wise. In common with all his people since the Roman ploughshare passed over Zion, he was a man of commerce, and noted for the justice of his dealings with both Jew and Gentile. His zeal against the idolatry of the latter might have rivalled that of the ancient Jehu, had he lived in an age more conducive to its display; but as things were, Benoni had suffered much and often for the faith of his fathers. Born in Poland about the time of his people's banishment from that country by Cassimer the Great, he had early become a wanderer, and persecution had tracked the course of his after years, pursuing him from city to city over the length and breadth of Europe; till, in the sunset of his days, he found a peaceful asylum in the once Moorish, but now Christian city of Granada. Blameless in his life, and most scrupulous in his piety, Rabbi Benjamin Benoni, in the judgment of his people, was entitled to expect every promised blessing annexed to the law of Moses; and some blessings he had received. His business had prospered in every land where he had sought a temporary refuge from Gentile oppression; and his wealth was then believed to exceed that of any

merchant in the city. But a strange affliction had fallen upon the rabbi in his latter days. Of the four children of his youth that grew to years of maturity, there was not one who cared for his age, or loved him as a father: all were gone from him, and he was alone; for the wife of his early choice had died in her summer, and her grave was far away among the hills of Hungary. One was a youth of promise and high hopes, who had become great and famous among the Gentiles for his knowledge of their lore. But he had forgotten his father, and, it seemed, his father's faith also; for he had long ceased to observe the ceremonies of the law, and now dwelt in the city of Salamanca, where he was renowned as a scholar, and much in favour with the Spanish nobility. The other had humbler aspirations. He wedded the maid of his heart, and dwelt in peace among his people, following their path of commerce. Love lit up his hearth, riches increased around him, and men esteemed him liberal and just; yet he never sought the house of his father, nor paused to inquire if it were well with him. The next was a daughter, deemed comeliest among the maids of Israel, fair and stately like the queens of Judah before she was made desolate. But the girl forsook her early faith and kindred for the name and the love of a noble Nazarene, and passed her father on the city streets in all her Christian splendour, as one who dreaded not his wrath, and sought not his friendship. The last was a maiden wise and gentle, but not fair. None had sought her, and she remained unwedded, but left her father in early youth to watch over the orphan children and home of an aged rabbi, and returned to his house no more.

Benoni's heart grew heavy within him as he thought of these things in his lonely chamber. Dust was on his gray locks, and sackcloth was his garment; for it was the time of the full moon, and he mourned, according to his vow, for the great and strange sin of his children. The evening of the second day was come, the hush of the dying twilight had fallen on the great city, and all was silent where the rabbi prayed, looking to the east, the place of morning, and the still promised land to which his fathers had turned through the prayers and wanderings of ages. He prayed long and wept sore; for sorrow was upon him, and he found no comfort. But when the last light was fading, there came a low knock to the chamber door, and a voice of earnest intreaty, which said, 'Benjamin Benoni, for the sake of Jerusalem arise and follow me!'

The rabbi rose astonished, for the voice was strange, and spoke in the old language of the Hebrews, that had long been silent on earth. Without, there stood a man tall and dark, and in the vigour of his years; his garb was of an ancient fashion, his beard long and flowing, and his countenance expressed majesty mixed with sweetness. He beckoned with his hand, and Benoni followed him, though he knew not whither, yet felt as if impelled to go. They left the home of his solitude behind them, and passed through the streets and gates of the city, and then along a great road leading northward, which Benoni, in all his wanderings, had never trod before. It was broad and lonely, and led far away over hill and valley, through forest and desert plain; and by the full bright moon, which shone upon their journey, the rabbi discerned with amazement the long-remembered features of many a far-distant landscape seen in his early journeys: but the ground was smooth beneath his steps, and his feet seemed swift as the wings of an eagle; for he felt no weariness, but journeyed on with that silent guide leagues after leagues, till it seemed to him they had tracked the boundaries of many a Christian realm: they paused at last, where the moon shed her silver rays on the spires of a slumbering city, and the rabbi well remembered the good old town of Presburg.

Midnight lay clear and still on the city of the Magyars; for all its thousands slept, and Benoni's guide conducted him in silence from street to street, till they reached a large but neglected house, whose doors seemed

to open before them; and on entering, the rabbi recognised it as the same which he had occupied twenty years before, when his children were young, and their mother dwelt with him. Benoni would have spoken his surprise, but a spell of silence was upon his lips, and he could utter no sound. The house was still inhabited, but its dwellers saw neither the rabbi nor his guide; though days and nights seemed to pass, and they were with them from hour to hour, marking the manner of their lives at hearth, and board, and prayer. The family were Israelites, and oh how like his own as they once had been! There was a father in the noon of life, a mother fair and gentle, and four young children beautiful and fresh as the first leaves of the vine. Without they had peace, and they felt no want within; yet their home was unhappy; its chambers were solitary and cheerless, for their echoes never woke with the joy of the young, nor the sound of festal gladness: there was a shadow on the mother's beauty cast by unquiet days. The children had sad and thoughtful faces, that told of precocious care; and there were harsh words and fierce disputes that came often among them, as if the thorns of life had grown up early, and choked the flowers of childhood. But Benoni marvelled not; for he saw that the taresower was the high priest of the hearth. The man was one to be well spoken of in the city for grave carriage and integrity; but he sat amid his household as a reprover and a judge, who had no sympathy with their hearts, and no regard to their wishes. None among the doctors of Judah could better interpret the law, and few were more strict in its outward observance; but he made it wearisome to his household by enforcing its thousand ceremonies, and neglecting the 'weightier matters,' which his own example should have taught them by the law of love. Benoni marked the canker working its way to the hearts of the young; he saw the dew of their spring days, the keen relish of life's first enjoyments, that comes no more to those who taste the wormwood, and the blameless desires of childhood, so earnest yet so easily fulfilled, sacrificed day by day to the pride of their father's profitless wisdom, to the folly of his false devotion, and the bent of an evil nature that delighted to rebuke.

The dark seed bore its fruit: the children shunned his presence, and beheld his approach with fear: their laughter died at the sound of his step, and they learned to look upon him as an enemy, whilst round their gentle but simple-hearted mother their gathered affections were twined. She, too, felt her home unloved, and her life weary, for the manner of the husband and father was the same. The tree which she had chosen she found to be a brier. Years of hopeless discontent brought early withering, and at last disease came upon her. She heard the summons of the grave, and grieved not to go, for her wedded life had known no comfort; yet she sorrowed to leave her children, but not to part from the spouse of her youth. He saw his work, but knew it not, for his trust was still unshaken in the power of his vain wisdom and the pride of his long prayers. Benoni grew sad; for, as that fair face faded, its features grew more and more like to those of his lost *Jemima*, and at length it was her very self. The guide, however, again beckoned him away, and he felt constrained to follow. They left the dwelling and journeyed on; the same great road still stretched before them; but now it wound away like a long river to the west. Again the rabbi found himself passing swiftly through lands traversed before. Many a stately city, the long-desired goal of far-sailing ships and weary caravans; many a dark fortress, that guarded the boundaries of hostile nations, they passed as the wind in its unseen flight; till, fair among her vines, and crowned with the glory of centuries, rose to their view the city of the Seine. The glare of torches and the roll of chariots swept along the never-silent streets, as the gay and noble of the land returned from their long, late revels. Benoni's conductor led him on to a low but open door, far from such scenes, in the quarter inhabited by the sons of toil and Israel.

Well the rabbi knew that house and its narrow chambers, for there, in his wanderings westward, he had once dwelt with his children; but seven long winters had passed over him since then, and days and nights again seemed to glide swiftly by as he and that silent guide beheld the unconscious household. They were the same forms and faces he had seen at Presburg, though changed as if by the march of many years. The children had grown to stately youths and dark-haired maidens; but the mother's glance was wanting, for the light of her love might shine on their path no more. Grayness had come upon the father's locks, and furrows on his brow, but he had learned no lesson from the voice of time: age had only deepened the darkness of his soul, and strengthened in its shadow the love of power and gold. He barred his sons from the love of the Gentile nations, deeming it forbidden, because beyond his knowledge. One was a gifted spirit, strong to think and question, and he despised the faith of Israel because of him who taught it. The other had no gifts, but many graces, and his father esteemed him little, because he had no part in the praise of men. He denied to his daughters the ornaments of youth, and called them sinful vanities; but it was because he valued the smallest coin in his coffers more than the pleasures of his children. Yet he looked with pride on one who walked in beauty; but his glance was cold and careless on her sister, who, though less fair of face, was far more fair in soul. The tares which the old man had planted so early were ripening fast around him; his children already scorned his rebukes, and scarcely heard his counsels, for they had outgrown the fears of childhood, and he had not won the love of their youth: he had made their home solitary, and long habit had rendered them unsocial. Their sphere of society was bounded by each other; and their dwelling was indeed a world to them, but a world which contained in its narrow limits all the evils of the outer earth. The contentions of jarring opinions, the discord of opposing tempers, and the strife of conflicting, though petty interests, banished love and peace from the hearth which should have been their altar—darkened the gray of age, and withered the green of youth.

The rabbi saw, and rejoiced for the gentle mother who had escaped so much in the hush of her early grave; but once more that voiceless conductor beckoned him away from the cheerless dwelling of that joyous city. Their journey was still on the same broad and lonely path towards the place of the setting sun. Swifter still, but still unwearied, Benoni found himself speeding on, rather like one borne upon the waves of a rapid river, than the traveller of the solid earth. But now the way-marks grew more familiar; he knew the white sierras and dark-green woods of Spain, and at last entered at the very gate by which he went forth, the lost but long-beloved city of the Moors. The stranger guided him on through the hushed but well-known streets, till they reached the silence of his own forsaken dwelling. The full moon was still bright above the towers of Granada—though it seemed as if that midnight journey had tracked the course of years—and poured the full flood of her silvery splendour on a solitary chamber where an aged man sat silent and alone. Well the rabbi knew that face, though the furrows were deepened, and the eye dimmed with the shadows of life's closing twilight, since he beheld it last. It was the same he had seen among the children at Presburg and the young at Paris. But the old man's household had gone from him one by one, and left him alone in the winter of his days, like a desert to which the pilgrim desires not to look back; for the place which he filled was the dark spot of their memory. Through all its withering and changes, that form had been to Benoni as one familiar, though without a name; yet now, as he gazed on the forsaken man, the rabbi seemed to be transformed strangely and suddenly as men are in their dreams, till it was himself that stood in the moonlit chamber, with all that weight of solitude and years. 'Benjamin Benoni,' said the

glorious guide, who still stood by him, 'I am the angel of wisdom who guided Solomon in his search for hidden truth. The way which thou hast trodden is the path of memory, in which the steps of the aged wax not slow, nor the eyes of the slumberer dim. By it thou hast retraced the wastes of thy many wanderings; thou hast seen the working of thy boasted wisdom, and looked on the gems of life, the trampled and cast from thee, where they lie far away in the wilderness of time. Learn from these things what sins thou shouldst lament, and tell thy tale, that others may learn from thee.' As the last words fell on the ear of the rabbi, the angel of wisdom passed from his dwelling, and we know not if he ever returned: from that hour Benjamin Benoni mourned no more for the sins of his children, but he sorely mourned for his own.

OCCASIONAL NOTES.

DISINTERESTED LEGATEES.

ABOUT forty years ago, an old man of Scottish birth, who had realised a large fortune in England, and from time to time made purchases of landed property in his native county, died after a protracted life of miserable penury, leaving only collateral relations. These persons had fully expected to be benefited by their kinsman, so that their surprise was necessarily very great when they learned that he had executed a conveyance of his whole property to a legal practitioner of Aberdeen, who had been accustomed to manage it. It appeared that the old man, under the influence of mere crotchets, or some temporary irritation, had resolved to disappoint them, at the same time that he enriched a man who had no natural claim upon his regard.

The relations had hardly recovered from the first sense of discomfiture, and the friends of Mr C— had scarcely begun to congratulate him upon his good fortune, when he announced to the heirs that he had destroyed the deed, and that the property would consequently pass to them as if the deceased had been intestate. He had with reluctance, he said, consented to allow of the deed being drawn up, and only for the purpose of securing the property for the rightful heirs. These individuals consequently entered upon full possession of the old man's estates and effects. They pressed upon the agent's acceptance a gift of about six thousand pounds, in gratitude for his honourable conduct. It is pleasant to record that he is still living, and a considerable land proprietor in the district where he originally practised as a solicitor or agent.

More recently, a circumstance somewhat similar took place. Two aged sisters were joint-proprietors of an estate in Perthshire. The elder was married, and had a son; the other was unmarried. The elder dying first, her share of the property was inherited by her son, then an officer in the Guards. The second lady, having some groundless dislike to this gentleman, bequeathed her share to a favourite nephew, far down in the family tree, and who had no expectation of such an inheritance. Finding, after the death of the old lady, how the property was destined, this gentleman lost no time in writing to his cousin—a person, we may mention, with whom he was but slightly acquainted, for they had been living at a distance from each other, and were in totally different walks in life—informing him that he could not for a moment think of taking advantage of such a will, but begged to surrender his right, without any reserve, into the hands of the heir-at-law. What added to the merit of this action, the legatee considered the whole matter as a private family affair, and said not a word about it to any besides the party principally concerned. It only became known in consequence of legal proceedings for the transference of the property to the heir-at-law, an opinion from counsel having decided that it was best to proceed upon the will, instead of holding it as null, which was the wish of the legatee.

These examples of a high conscientiousness will be admired by all. They are felt to be the nobler, that public opinion would not have greatly resented a more selfish procedure in either instance. The agent might have appropriated the estate of his client, to the preclusion of the natural heirs, and still more might the junior cousin have sat quietly down in possession of his aunt's property, without forfeiting the esteem of society, seeing that they only did what the law allowed, and what hundreds would have done in their case. We therefore unavoidably accord high praise to their conduct, which we see to have sprung entirely from a genuine integrity and unselfishness of nature. But, it may be asked, is this approbation of such conduct a good sign of the public morality? We fear not, for absolutely the course taken by these two men was precisely what ought to have been taken, and no more. Their conduct only shines by reason of our believing that most men would have acted differently. Let us fully admit, then, the relative merit, seeing that most men feel as if they were well enough if they only act as their neighbours generally do, and any exception from common selfishness argues a superior nature. But still let us also understand that such actions ought not to be rare, nor their merit felt as calling for unusual notice or commendation.

For what are all such eccentric bequests? Are they not in almost all cases the result of mere dotage—not, perhaps, a provable insanity, but a prave state of the natural feelings arising from age or disease, and dictating a destination of goods which the testator would himself, in an ordinary condition, view with horror? A testator, in such circumstances, is a man at issue with himself. He does now, in his seventieth year, we shall say, what, throughout the previous sixty-nine, he would have condemned in the strongest terms. He, therefore, who takes advantage of the bequest of a testator ascertained to be of this character, may be said to assist him in outraging his own normal feelings, and rendering his name a by-word and a reproach. The part which he acts is little better than that of a man who accepts some costly gift which a child in the simplicity of its heart has offered, not knowing its value, and unrecking that its parents were the true owners. Nor is this all; for all such conduct tends to lower and keep down the standard of the public morality. It gives a disgusting sanction to the maxim of every man for himself, which is the purest essence of barbarism, and tends more than anything else to retard the happiness of mankind.

PUNCTUALITY.

Punctuality to engagements is a species of conscientiousness—a conscientiousness towards our neighbours' time. The gentler sex are sadly deficient in it, probably from their being less accustomed to business arrangements than men. A whimsical friend used to recommend those having appointments with ladies always to go an hour too late. 'You thus have the moderate revenge of keeping them waiting a quarter of an hour, for the three quarters which they would have been sure to keep you waiting, if you had been punctual.'

GUNPOWDER CELEBRATIONS.

Does it never occur to any one that the firing of cannon to mark distinguished events and their anniversaries is far from being a rational practice? What is most objectionable about this folly of the grown-up world, it sanctions similar practices on a smaller scale among boys, who, on several days of every year are a source of danger both to themselves and others. Many a quiet family are little aware of the gunpowder plot carried on in cellar, closet, or garret, by the male juveniles of their establishment for several days before the royal birthday, or that the son whom they suppose to be at school, or at least enjoying some innocent recreation, is busied in some coarse mob not far from their home firing off pigmy ordnance, squibs, crackers, and other examples

of pyrotechny. Hardly a year passes without its gunpowder victims, and sometimes the spirit of the fireworshippers leads to actual rioting and destructive violence. We must really take leave to doubt that any benefits can be derived from a sulphureous celebration of great days, comparable to the evils which it entails; and we cannot doubt that amusements of a rational and harmless kind could easily be substituted, such as the visiting of museums, zoological gardens, picture galleries, and 'show places' generally. The first step in reform is one belonging to persons in authority: the firing of cannon on such days ought to be given up.

THE GIBBET.

The gibbet has not fifteen years' life in it. If in 1860, fifteen years hence, there shall be a death punishment existing, if we shall still be in this world together, reproach me with being the falsest prophet, the veriest fool, that ever presumed to talk of the advancing spirit of the times.—*Lord Nugent.*

We cordially agree with Lord Nugent, and undertake a share of the hazards to which he here exposes himself.

RESUSCITATION.

The purpose of respiration is to expose the portion of the blood which has returned to the heart, after it has circulated through the body, and which has acquired during that circulation the properties of dark or venous blood, to the influence of atmospheric air in the lungs. The oxygenous portion of the air so received into the lungs converts this venous blood into florid or arterial blood; that is, into a state for being again circulated through all parts of the system. Any interruption to this process—by submersion in water, exposure to choke-damp, strangulation, and the like—if continued beyond a few minutes, is destructive of life. Recovery is, however, possible within certain limits; hence the resuscitative appliances to cases of 'suspended animation.'

The restoratives generally resorted to are warmth, friction, electricity, and, above all, supplying of the lungs with fresh or properly oxygenated air, either by free exposure to an external current, or by artificial injection. The cause of the latter appliance is sufficiently obvious, as the cessation of the heart's action—technically called *asphyxia*—is occasioned by the interruption of respiration, or rather by the interruption of the effect produced by that function on the blood. Any means, therefore, that can restore the process of respiration, or otherwise supply its place, till the action of the heart has been established, must be of value in resuscitation, and especially so where they can be applied with ease and rapidity. Various apparatus have been invented for the injection of common air; but as this fluid contains only about twenty parts in the hundred of pure oxygen, its effect upon the blood in the lungs cannot be so rapid as that of a mixture containing a greater proportion, and still less so than oxygen itself. This gas has accordingly been long recommended; but the difficulty of obtaining it with sufficient rapidity has hitherto proved a barrier to its application. A new mode has, however, been proposed by Dr George Wilson of Edinburgh, by which an unlimited supply can be obtained and administered in a few minutes, and it is to this that we would direct more general attention.

It has been some time known that the chlorate of potash, if mixed with a metallic oxide—such as the peroxide of iron, or the black oxide of manganese—and heated to redness, will give off oxygen in a copious stream, and without any interruption, so long as there is any of that gas in the compound. The proportion of the metallic oxide to the chlorate is a matter of difference among chemists; but Dr Wilson has found by repeated experiment that about one of the former to five of the latter is the most advantageous. We were recently invited to witness in his chemical class-room an exhibition of the apparatus by which he proposes to administer the gas, and which, in the opinion of medical men, is likely to prove efficacious. In this case the supply was

on a limited scale only—some 600 or 800 cubic inches in four minutes—but from the rapidity and certainty with which the gas was produced and administered to a fictitious patient, it left the most favourable impression upon the minds of the spectators. A glass retort containing four or six ounces of the mixture was heated with a spirit-lamp, and in a few seconds the gas began to be evolved, the evolution increasing in rapidity, till at the second minute it flowed over in a continuous stream, and was conveyed into an ordinary telescope gasometer. From this reservoir it was extracted by means of injection bellows fitted with flexible tubes, and then conveyed to the lungs of the supposed patient. This contrivance was next abandoned, and the head of the patient placed in an air-tight box, into which the gas was conveyed from the gasometer. This box was fitted with a glass-slip for watching the changes produced on the countenance of the patient; and the necessary inspirations and expirations were caused by external pressure on the chest, as is done in ordinary cases of administering atmospheric air. Indeed several methods of applying the gas were suggested; but to these we need not advert, as the great merit of the proposal consists in the rapidity with which the supply can be produced and administered. On this head we think Dr Wilson deserving of the thanks of the public, and especially for the pains he has taken in laying it before the medical faculty, the directors of humane societies, and others capable of making the application. Of the individuals who are asphyxiated by submersion, exposure to choke-damp, &c. only a small per centage are resuscitated by the appliances at present in use; but there is every reason to conclude that if a supply of oxygen were obtained by the means above proposed, and kept in readiness at the offices of humane societies and otherwise, the recoveries would be trebled, or even quadrupled. It is agreed on all hands that pure oxygen is more efficacious in asphyxia than common air; and certainly no plan could be more rapid or more economical than that proposed by Dr Wilson.

THE POETRY OF ALFRED TENNYSON.*

Among the assertions most often made in the present day, is one, that the age of poetry is past, or passing. It is said that men are so engrossed with material interests and the struggle for subsistence, that they have little time or inclination to listen to the voices of the poets; and that even if the contrary were the case, they would not prefer the poets of the present day. These opinions have become an article of faith with many, and book-sellers especially cling to them with a pertinacity which can only result from conviction. Whether they are right, and whether the age deserves this character, we shall not stop to inquire; we merely allude to the subject, to introduce the name of Alfred Tennyson, and to cite his popularity, either as a great exception to the charge, if it be, generally, a true one, or as a great proof of its falsehood, if it be a false one.

In the year 1830, Mr Tennyson, then a very young man, published a small volume of poems, which met with rather severe treatment from one or more of the most influential reviews. Four years later, he issued another volume, which met a reception as unfavourable. For ten years after this he ceased to publish; his name did not appear in magazines or annuals as a contributor, neither was he mentioned in any way in the catalogues of the publishers. He was not, however, forgotten. During the interval, there had been growing in many minds a sense of his merits: the number so

* This article has been written at our request, in order to convey to our readers some idea of the writings of Mr Tennyson, now rising into repute. Having ourselves had no opportunity of forming an opinion of his merits as a poet, we have to request that our readers will consider the criticism in the present paper as not ours, but that of a gentleman in whose judgment we have general reason to place confidence.—Ed.

affected was constantly increasing: and there existed, in short, a large class of well-informed men, who considered that he was a true poet. In the year 1842 appeared a reprint of the most of his pieces, some having been omitted, in consequence probably of the strictures of the reviewers, and some of them having been slightly altered, together with a series of new poems, the whole forming two small octavo volumes. Without any aid from literary cliques, without any resort to the aids of puffery now so common—arts without which even merit itself hardly appears able to obtain a hearing—these volumes found favour with the public, and in three years have run through as many editions. Suddenly, it has become the fashion to consider Alfred Tennyson as a great poet, if not as the 'poet of the age.' It must be allowed that in these days, when the multitude of competitors renders fame so much more difficult of acquirement than it was in days gone by, there must be rare merit in the writer, who, living apart from the busy world as Mr Tennyson does, and either scorning or being too indolent to employ the machinery by which reputations are partly to be made, has assumed so high a position in the eyes of his contemporaries. A careful study of Mr Tennyson's poems has numbered us in the ranks of his warm admirers; not among that unthinking portion who repeat their praise at second-hand, and who, without knowing why, exalt the object of it greatly beyond his merits, but among those who see in what he has done a very rare excellence, and the promise of still higher achievements, if he will only remain true to his vocation.

Mr Tennyson, we must admit, is inferior to no poet of the present generation; and if we were called upon to state his equal, we should have some difficulty, among the many vigorous spirits whose names are rising one after the other upon the literary horizon, to prove the immortality of the poetic spirit, in pointing out one who has written uniformly so well, and who has proved himself so capable of still greater triumphs.

Those who consider him the poet of the age, have, we think, fallen into a mistake. He may perhaps be the best the age has produced; but the poet whose genius shall reflect and be reflected by this age has yet to make himself known. With all his power and beauty, Mr Tennyson is not that man, if his claim is to rest upon what he has already done. The spirit of this age is that of hope. It is a spirit of action and of enterprise—a spirit of keen inquiry, which would have nothing hidden from its scrutiny either in the present or in the past, the more especially if any lessons can be learned from either for the improvement of the actual, or the attainment of the possible. It is a spirit of energy, of material progress, of free examination—a spirit of movement among the masses of mankind—a spirit from the operations of which we may anticipate, without being over-sanguine, that each successive generation will be wiser and happier than the generation that preceded it. The character of Mr Tennyson's muse is very different. He clings to the memories of the past, and although occasionally his aspirations for the future are elevated and ennobling, they are not so frequent as to form the pervading characteristic of his mind. His muse is one of contemplation more than of action—a muse attuned to the harmonies of nature; sweet, plaintive, and melancholy, with a classical elegance and purity, and a simplicity of loveliness that wins upon every reader the more he studies it. In an age that examines all things, questions all things, experimentalises upon all things, overthrows old systems before it has devised new ones, and whose motto is, 'On—for ever on,' Mr Tennyson anchors his poetical bark upon the traditions of yore, and allows the winds of the present or of the future to blow around him, but not to urge him to any progress. He has a deep knowledge of the human heart, great earnestness of mind, a consummate mastery of the art of versification, and sympathies that are ever on the side of the multitude; but too deeply impressed with the beauty of the classics, and with the exquisitely

poetical mythology of the Greeks, he has become the poet of scholars, and not, as he might have been under a ruder and more comprehensive training, the poet of the people.

The prevailing characteristic of his style is a quaint and quiet elegance, and of his mind a gentle melancholy, with now and then touches of strong dramatic power, the whole coloured by the peculiar scenery of that part of England where he has long resided. Any attentive reader of his poetry, who may have been ignorant that he is a dweller amid the fens of Lincolnshire, would soon suspect this to be the case, when he found such constant pictures of fens and morasses, quiet meres, and sighing reeds, as he so beautifully introduces. We shall not quote as a specimen the beautiful poem of *Mariana in the Moated Grange*, which must be familiar to most readers, having gone the round of almost all the newspapers and periodicals of the country, although it would exemplify all the points we have stated, but shall mention a few instances from other poems less known. The exquisitely modulated poem of the *Dying Swan* affords a picture drawn, we think, with wonderful delicacy:—

Some blue peaks in the distance rose,
And white against the cold-white sky
Shone out their crowning snows.
One willow over the river wept,
And shook the wave as the wind did sigh;
Above in the wind was the swallow,
Chasing itself at its own wild will;
And far through the marsh green and still,
The tangled water-courses slept,
Shot over with purple, and green, and yellow.

The ballad of *New-Year's Eve* introduces similar scenery:

When the flowers come again, mother, beneath the waning light,
You'll never see me more in the long gray fields at night,
When from the dry dark wold the summer airs blow cool
On the oat-grass and the sword-grass and the bulrush in the pool.

In the fragment of an epic on the death of *King Arthur* full of most mournful beauty, we have—

I heard the water lapping on the crag,
And the long ripple washing in the reeds,
* * * * *
Then quickly rose Sir Bedivere, and ran,
And leaping down the ridges lightly, plunged
Among the bulrush beds.
* * * * *

The barge, with oar and sail,
Moved from the brink like some full-breasted swan,
That fluting a wild carol ere her death
Ruffles her pure cold plume, and takes the flood
With swarthy webs. Long stood Sir Bedivere,
Revolving many memories, till the hull
Looked one black dot against the verge of dawn,
And on the mere the wailing died away.

Many similar pictures and expressions might be cited, to show how thoroughly the poet's mind has been tinted by the scenery amid which he has studied. We find constantly throughout the volumes such expressions as 'waste fens,' 'windy fields,' 'glooming flats,' 'sullen pools,' 'sluices with blackened waters,' 'sedges dank,' 'water-lilies,' and all the other accessories wanting to complete a Lincolnshire landscape. These expressions, constant as they are, never weary. They are never introduced inopportunely; and they impress the mind of the reader almost as vividly as the objects referred to must have impressed that of the writer, and are besides a relief to the constant sameness of English scenery, as depicted in the pages of other poets.

Another characteristic of Mr Tennyson's style is his beautiful simplicity. Let no one underrate so great a merit. The first poetry of barbarism, and the most refined poetry of advancing civilisation, have it in common. As a specimen of great power and great simplicity, we make the following extracts from his poem on the old legend of the *Lady Godiva*:—

She sought her lord, and found him where he stood
About the hall, among his dogs, alone.
* * * * *
She told him of their tears,
And prayed him, 'If they pay this tax, they starve.

Whereat he stared, replying, half-amazed,
 'You would not let your little finger ache
 For such as these?' 'But I would die,' said she.
 He laughed, and swore by Peter and by Paul,
 Then flung at the diamond in her ear:
 'Oh ay, oh ay, you talk!' 'Alas!' she said,
 'But prove me what it is I would not do.'
 And from a heart as rough as Esau's hand,
 He answered, 'Hide you naked through the town,
 And I repeat it;' and nodding, as in scorn,
 He parted.

So, left alone, the passions of her mind—
 As winds from all the compass shift and blow—
 Made war upon each other for an hour,
 Till pity won. She sent a herald forth,
 And bade him cry, with sound of trumpet, all
 The hard condition; but that she would loose
 The people. Therefore, as they loved her well,
 From then till noon no foot should pace the street,
 No eye look down, she passing; but that all
 Should keep within, door shut, and window barred.

Then fled she to her inmost bower, and there
 Unclasped the wedded eagles of her belt,
 The grim earl's gift; but ever at a breath
 She lingered, looking like a summer moon
 Half dipt in cloud: anon she shook her head,
 And showered the rippled ringlets to her knee;
 Unclothed herself in haste; adown the stair
 Stole on; and, like a creeping sunbeam, slid
 From pillar unto pillar, until she reached
 The gateway: there she found her palfrey trapped
 In purple, blazoned with armorial gold.
 Then she rode forth, clothed o'er with chastity;
 The deep air listened round her as she rode,
 And all the low wind hardly breathed for fear.
 The little wide-mouthed heads upon the spouts
 Had cunning eyes to see: the barking cur
 Made her cheek flame: her palfrey's footfall shot
 Light horrors through her pulses: the blind walls
 Were full of chinks and holes; and overhead
 Fantastic gables, crowding, stared: but she
 Not less through all bore up, till, last, she saw
 The white-flowered elder thicket from the field
 Glean through the Gothic archways in the wall.
 Then she rode back clothed on with chastity;
 And one low churl, compact of thankless earth,
 The fatal byword of all years to come,
 Boring a little anger hole in fear,
 Peeped; but his eyes, before they had their will,
 Were shrivelled into darkness in his head,
 And dropped before him. So the powers, who wait
 On noble deeds, cancelled a sense misused:
 And she that knew not, passed; and all at once,
 With twelve great shocks of sound, the shameless noon
 Was clashed and hammered from a hundred towers,
 One after one; but even then she gained
 Her bower: whence releasing, robed and crowned,
 To meet her lord, she took the tax away,
 And built herself an everlasting name.

The ballad of 'Lady Clara Vere de Vere' might also be cited as a specimen of extreme simplicity united with great force; but as it has lately gone the round of the journals, we shall make an extract from a poem less known, and the length of which has saved it from so much newspaper publicity. 'The Talking Oak' is the title of a fanciful and beautiful ballad of seventy-five stanzas, in which a lover and an oak tree converse upon the charms of a sweet maiden named Olivia. The oak tree thus describes to the lover her visit to the park in which it grew:—

'Then ran she, gamesome as the colt,
 And livelier than the lark,
 She sent her voice through all theholt
 Before her, and the park.

And here she came and round me played,
 And sang to me the whole
 Of these three stanzas that you made
 About my "giant bole."

And in a fit of frolic mirth,
 She strove to span my waist;
 Alas! I was so broad of girth,
 I could not be embraced.

I wished myself the fair young beech,
 That here beside me stands,
 That round me, clasping each in each,
 She might have locked her hands.

'Oh muffle round thy knees with fern,
 And shadow Summer chase,
 Long may thy topmost branch discern
 The roofs of Summer place!

But tell me, did she read the name
 I carved with many vows,
 When last with throbbing heart I came
 To rest beneath thy boughs?'

'Oh yes; she wandered round and round
 These knotted knees of mine,
 And found; and kissed the name she found,
 And sweetly murmured thine.

A tear-drop trembled from its source,
 And down my surface crept;
 My sense of touch is something coarse,
 But I believe she wept.

Then flushed her cheek with rosy light;
 She glanced across the plain,
 But not a creature was in sight—
 She kissed me once again.

Her kisses were so close and kind,
 That, trust me, on my word,
 Hard wood I am, and wrinkled rind,
 But yet my sap was stirred.

And even into my inmost ring
 A pleasure I discerned,
 Like those blind motions of the spring
 That show the year is turned.

I, rooted here among the groves,
 But languidly adjust
 My rapid vegetable loves
 With anthers and with dust;

For ah! the Dryad days were brief
 Whereof the poets talk,
 When that which breathes within the leaf
 Could slip its bark and walk.

But could I, as in times foregone,
 From spray, and branch, and stem,
 Have sucked and gathered into one
 The life that spreads in them.

She had not found me so remiss;
 But lightly issuing through,
 I would have paid her kiss for kiss,
 With usury thereto.'

Oh flourish high with leafy towers,
 And overlook the lea;
 Pursue thy loves among the bowers,
 But leave thou mine to me.

Oh flourish, hidden deep in fern:
 Old oak, I love thee well;
 A thousand thanks for what I learn,
 And what remains to tell.

The poem of 'Saint Simeon Stylites' is of another character, and portrays the spiritual pride of an ancient fanatic, with a simple and savage grandeur of words and imagery which we have never seen surpassed. It is too long for entire quotation, but the following extracts will show its beauty:—

Although I be the basest of mankind,
 From scalp to sole one slough and crust of sin;
 Unfit for earth, unfit for heaven, scarce meet
 For troops of devils mad with blasphemy,
 I will not cease to grasp the hope I hold
 Of sainthood, and to clamour, mourn, and sob,
 Battering the gates of heaven with storms of prayer—
 Have mercy, Lord, and take away my sin.
 Let this avail, just, dreadful, mighty God;
 This not be all in vain; that thrice ten years,
 Thrice multiplied by superhuman pangs
 In hunger and in thirst, fevers and cold;
 In coughs, aches, stiches, ulcerous throes and cramps;
 A sign betwixt the meadow and the cloud,
 Patient on this tall pillar I have borne
 Rain, wind, frost, heat, hail, damp, and sleet, and snow;
 And I had hoped that ere this period closed,
 Thou wouldst have caught me up into thy rest,
 Denying not these weather-beaten limbs
 The meed of saints—the white robe and the palm.

Oh! take the meaning, Lord: I do not breathe,
 Not whisper any murmur of complaint.
 Pain heaped ten hundredfold to this were still
 Less burden, by ten hundredfold, to bear
 Than were those lead-like tons of sin, that crushed
 My spirit flat before thee.

Oh Lord, Lord!
 Thou knowest I bore this better at the first;
 For I was strong and hale of body then,

And though my teeth, which now are dropt away,
Would chatter with the cold, and all my beard
Was tagged with icy fringes in the moon,
I drowned the whoopings of the owl with sound
Of pious hymns and psalms, and sometimes saw
An angel stand and watch me as I sang.

Good people, you do ill to kneel to me.
What is it I have done to merit this?
I am a sinner viler than you all.
It may be I have wrought some miracles,
And cured some halt and maimed; but what of that?
It may be no one, even among the saints,
May match his pains with mine; but what of that?
Yet do not rise; for you may look on me,
And in your looking you may kneel to God.
Speak, is there any of you halt or maimed?
I think you know I have some power with Heaven
From my long penance: let him speak his wish,
For I can heal him. Power goes forth from me.
They say that they are healed. Ah, hark! they shout
'Saint Simeon Stylites.' Why, if so,
God reaps a harvest in me.
It cannot be but that I shall be saved,
Yes, crowned a saint. They shout 'Behold a saint!'
And lower voices saint me from above.
Courage, Saint Simeon; this dull chrysalis
Cracks into shining wings.

Oh, my sons, my sons!
I, Simeon of the pillar, by surname
Stylites among men—I, Simeon
The watcher on the column till the end—
I, Simeon, whose brain the sunshine bakes—
I, whose bald brows in silent hours become
Unnaturally hoar with rime—do now,
From my high nest of penance, here proclaim
That Pontius and Iscariot by my side
Showed fair like seraphs.

While I spake then, a sting of shrewdest pain
Ran shrivelling through me, and a cloud-like change
In passing, with a grosser film made thick
These heavy, horny eyes. The end! the end!
Surely the end! What's here? a shape, a shade,
A flash of light. Is that the angel there
That holds a crown? Come, blessed brother, come!
I know thy glittering face. I've waited long!
My brows are ready! What! deny it now?
'Is gone—'tis hers again: the crown! the crown!
So, now, 'tis fitted on, and grows to me,
And from it melt the dews of Paradise.

Speak, if there be a priest, a man of God
Among you there, and let him presently
Approach, and lean a ladder on the shaft,
And climbing up into mine airy home,
Deliver me the blessed sacrament;
For by the warning of the Holy Ghost
I prophesy that I shall die to-night
A quarter before twelve.
But thou, oh Lord,
Aid all this foolish people: let them take
Example, pattern—lead them to Thy light.

One more extract from the 'Lotos Eaters' will give a specimen of our poet's exquisite modulation of rhythm. This poem represents the luxurious lazy sleepiness of mind and body supposed to be produced in those who feed upon the lotos, and contains passages not surpassed by the finest descriptions in the Castle of Indolence. It is rich in striking and appropriate imagery, and is sung to a rhythm which is music itself.

Why are we weighed upon with heaviness,
And utterly consumed with sharp distress?
While all things else have rest from weariness?
All things have rest. Why should we toil alone?
We only toil, who are the first of things,
And make perpetual morn,
Still from one sorrow to another thrown.

Lo! in the middle of the wood
The folded leaf is wooed from out the bud
With winds upon the branch, and there
Grows green and broad, and takes no care,
Sun-steeped at noon, and in the moon
Nightly drow-fed; and turning yellow
Falls and floats adown the air.
Lo! sweetened with the summer light,
The full-juiced apple, waxing over mellow,
Drops in a silent autumn night.

All is allotted length of days;
The flower ripens in its place,
Ripens, and fades, and falls, and hath no toll,
Fast-rooted in the fruitful soil.

Let us alone. Time driveth onward fast,
And in a little while our lips are dumb.
Let us alone. What is it that will last?
All things are taken from us and become
Portions and parcels of the dreadful past.
Let us alone. What pleasure can we have
To war with evil? Is there any peace
In ever climbing up the climbing wave?
All things have rest, and ripen towards the grave;
In silence ripen, fall, and cease;
Give us long rest or death, dark death, or dreadful ease.

How sweet it were, hearing the downward stream,
With half-shut eyes ever to seem
Falling asleep in a half-dream!
To hear each other's whispered speech;
Eating the lotos, day by day;
To watch the crisping ripples on the beach,
And tender curving lines of creamy spray;
To lend our hearts and spirits wholly
To the influence of mild-minded melancholy;
To muse and brood, and live again in memory
With those old faces of our infancy,
Heaped over with a mound of grass,
Two handfuls of white dust, shut in an urn of brass.

We have not space for further extracts, but the beauty of these will show that Alfred Tennyson has not acquired fame without deserving it, and that he is not to be classed among the mob of mere verse-mongers, whose pertinacious pretensions are often a sore discomfort to the critic in the present day. Among his other pieces, we must mention the names of a few, which abound in beautiful passages, and are excellent both in design and execution. Of these our principal favourites are, 'The Two Voices,' 'Locksley Hall,' 'The Vision of Sin,' and 'Enone.' The first-named is perhaps the finest specimen of versification in the volumes: the thoughts are noble in themselves, and nobly expressed, and the argument is worthy of the high strain in which it is sung. The Two Voices are the conflicting opinions in the breast of a man who is half inclined to be weary of the load of existence, and to throw it off; and hope and despair, certainty and doubt, are pitted against each other to decide the great question of the value of existence. The victory in the argument is given at last where it ought to be given; and the man walks forth on a Sabbath morning into the fields, reconciled to himself and to his kind, and wondering, amid the beauties of nature, how he could have ever communed with a voice so barren as that of despair. Locksley Hall is a bold original ballad, constructed in a metre somewhat unusual and cumbersome at first sight, but wonderfully pliant and musical in the hands of our author; in which a lover having been jilted by a false lady, repels her memory from his heart with bitter scorn, and goes over the whole catalogue of possible excitements into which he may rush to forget her for ever, and at the same time give the world an impetus in the onward career of improvement. The poem is far too long for quotation; but any reader who may not have seen it, and who may be tempted by our praise to read and study it, will find it a masterpiece, and be convinced by every stanza that none but a poet of high and original powers could have produced it. The Vision of Sin is chiefly remarkable for the exquisite art displayed in the versification of the introductory passage, and the skilful harmonising of sound to sense, showing how thoroughly the author has studied the art of poetry; and what power is in him, if he would but wield it; whilst Enone is full of melancholy beauty and classic dignity.

In conclusion, we must express our hope that ere long English literature will again be enriched with a new volume from the pen of this author. Though not yet the poet of the age, he may perhaps become so. To reach this eminence, however, he must not linger too much upon the memories of the past; neither must he eat of the lotos, nor stray in the gardens of the Castle of

Indolence, in which we hear he takes more delight than becomes a man so gifted as he is. Whenever he does again appear before the world, a hearty welcome will greet him in every circle where poetry is still appreciated.

CROSSING THE ATLANTIC.

SOME weeks ago we had the gratification of inspecting that wonder of modern ship-building, the Great Britain; but before we describe the interesting things we then saw, it may be advisable to give a general account of the rise and progress of steam navigation across the Atlantic.

Before the first steamer made its way over the 3000 miles of sea which divides us from New York, communication was chiefly maintained by a fleet of sailing vessels—most of them built in America—called 'liners,' from their keeping up a regular line of communication between the two countries. They are considered, for fast sailing and skilful management, amongst the best ships on the high seas, taking on the average only thirty-two days to cross the Atlantic with heavy burdens. Yet, despite their general merits, they were liable, through the same causes that worse ships suffer from, to vexatious delays. During the stormy winter of 1836-1837, west winds prevailed with such strength and constancy, that for six weeks all the liners which started from the British ports were baffled by contrary winds, and at one time no fewer than eighteen mails were due at New York. Such delays were productive of something more than commercial inconvenience. In unusually protracted voyages, the passengers suffered extremely from want of food. So late as February 1837, the British ship *Diamond* arrived at New York from Liverpool, having been 100 days from port to port. There were 180 passengers, of whom 17 died, not from any disorder, but from mere starvation. The principal suffering was among the steerage passengers, the crew having been put upon allowance, and supplied to the last with food, though in small quantities. The description of the appearance of these poor wretches on their arrival, given by an eye-witness, is heart-rending. One man lived nine days on potato-peelings soaked in his scanty allowance of water; although, for any ordinary voyage, the supplies were abundant. Some, who had extra quantities, sold their stock of food to their less provident fellow-passengers, first at moderate rates, but, as the scarcity more fully developed itself, at enhanced prices, until finally half a sovereign was asked for a pint of meal. Before the arrival of the vessel, a sovereign had been offered and refused for a potato, as it was roasting before the fire.

The amount of commercial disaster arising from the frequent but unforeseen delays of sailing vessels may be judged of from the fact, that during 1837 a general break-up took place among the American merchants in London, solely occasioned by the ruthless winds, which kept back their ships and remittances.

It was natural, therefore, that steam should be earnestly looked to as a means of mitigating, or, if possible, of obviating such disastrous delays. Some such effort was in reality demanded, by the rapid increase of commerce between Great Britain and America.* Steam had long been most advantageously employed in river and coast navigation, though no successful voyage had been made across the main.

When it was first proposed to send a steam-vessel across the Atlantic, scientific men, who were looked up to as authorities on the point, declared that, if attempted, it would be found impracticable. Despite this opinion, however, some spirited merchants of Bristol determined to try the experiment, and forthwith laid down the

hull of a steamer, which it was their intention to send over the ocean at all hazards. While the ship was being built, it happened that the British Association for the Advancement of Science met at Bristol, and one of its members demonstrated theoretically that a steam voyage direct to New York would be quite impracticable. And here we shall take leave to relate a story quite in point to this unfulfilled prophecy:—An English nobleman, who was staying in France, proposed to run his fleetest race-horse against time. The *savants* immediately set to work to calculate whether the feat were possible or not. They reckoned the volume of air the horse should displace at each bound, multiplied the weight of this by the necessary velocity, ascertained the strength of the horse by a dynamometer—and, putting w for the weight, v for the velocity, and p for the power, proved, without running far into the calculation, that the achievement was impossible ($w \times v > p$). The Englishman was puzzled, admitted the demonstration to be irrefragable, but nevertheless ran his horse—and won!

This was nearly what happened to the Great Western and her premature critics. The mathematician alluded to computed that, for each horse-power of steam, one ton of coals would be required for every 1425 miles. 'Taking this as a basis of the calculation,' said he, 'and allowing one-fourth of a ton of coals per horse-power as spare fuel, the tonnage necessary for the fuel and machinery on a voyage from England to New York would be 370 tons per horse-power, which, for a vessel with engines of 400 horse-power, would be 1480 tons.* Now, as the ship referred to was only intended to be 1200 tons' burden, the voyage was demonstrably impracticable.

The owners, however, placed more confidence in the practical skill of their engineers and ship-builders, than in the theoretical calculations of the philosopher. The ship was completed, and proved to be of the following dimensions:—Length of deck 230 feet; breadth, including paddle-boxes, 58 feet 4 inches; depth of the hold 23 feet; the vessel, when laden, drawing 16 feet of water. The paddle-wheels were 28 feet in diameter, each paddle-board being 10 feet long. There were two engines, of 225 horse-power each, weighing together 200 tons; the boilers—of which there were four—100 tons additional. Instead of 1200 tons, as at first intended, the tonnage had been increased to 1340 tons. The total cost of the ship was about £63,000. When ready for sea, she was freighted; seven adventurous persons became passengers; and on the 8th of April 1838, the Great Western started from Bristol to solve the great problem of ocean steam navigation.

A few snatches from the journal of one of the passengers were published in the Quarterly Review.† From them we learn that the new steamer had only been three days at sea when she overtook a brave old 'liner,' which had sailed from Liverpool seven days earlier, 'careering and plunging to a lively foam and a fair wind.' The Great Western dashed a-head, soon leaving the sailing-vessel astern. The new wonder of the deep continued her voyage without interruption, and arrived off New York on the afternoon of St George's day, having performed the voyage in the unprecedentedly short space of 15 days and 10 hours, without let or hindrance, and with several tons of coals to spare.

It is necessary to state here, that three days before the Great Western set out, the *Sirius*—a steamer which usually plied between London and Cork—was despatched, and arrived on the morning of the same day (23d of April). The wharfs and shores within view of New York harbour were crowded with thousands of spectators who had welcomed the arrival of the *Sirius*, and tarried anxiously for the approach of the Great Western. They had not long to wait, for a few hours after the *Sirius* had dropped anchor, a long trail of smoke was seen in the distance, and the hull of the expected steamer appeared. The sight afforded to those on board the Great Western was peculiarly exciting. From the time of her crossing the bar of the harbour,

* Of the total produce and manufactures exported from Great Britain and Ireland in 1836 (valued at £53,368,572), as much as was declared to be worth £12,425,605 sterling went to the United States—that is to say, the Americans were our customers to the extent of above 23 per cent. of our entire exports for that year!

* Report of Proceedings of British Association.—*Athenaeum*, vol. ix. p. 636. See also *Edinburgh Review*.
† Volume III.

all her 'poles' were set aloft, and flags gaily streaming at each—the foreign ensign at the gaff, and at the fore a combination of the British and American. 'At 3 P.M.' continues the passenger above referred to, 'we passed the Narrows, opening the bay of New York, sails all furled, and the engines at their topmost speed. The city reposed in the distance, scarcely discernible. As we proceeded, an exciting scene awaited us. Coming abreast of Bradlow's Island, we were saluted by the fort with twenty-six guns (the number of the States): we were taking a festive glass on deck. The health of the British Queen had just been proposed, the toast drunk, and, amid the cheers that followed, the arm was just raised to consummate the naming, when the fort opened its fire. The effect was electrical—down came the colours, and a burst of exultation arose, in the midst of which the President's health was proposed. The city now grew distinct: masts, buildings, spires, trees, streets, were discerned; the wharfs appeared, black with myriads of the population hurrying down, at the signal of the telegraph, to every point of view. And then came shoals of boats—the whole harbour covered with them. And now the new-comer reaches the Sirius, lying at anchor in North River, gay with flowing streamers, and literally crammed with spectators—her decks, paddle-boxes, rigging, mast-head high. We passed round her, giving and receiving three hearty cheers, then turned towards the Battery. Here myriads again were collected: boats crowded round us in countless confusion: flags were flying, guns firing, and bells ringing. The vast multitude set up a shout—a long enthusiastic cheer—echoed from point to point, and from boat to boat, till it seemed as though they never would have done.'

So much for the first transports; and after them a little dry investigation into the wherefore of two ships crossing the broad Atlantic in defiance of mathematical calculation, will not come amiss. On examination, it turned out that, although the computations were correct enough, the scientific men were out in their data. The voyage did not require nearly four tons of coals per horse-power, as was proved by the consumption on board each vessel. The Sirius carried no more than 453 tons of coals; but she was also provided with 43 barrels of resin, which is said to equal 214 tons of coals. On taking stock at New York, it was found that 22 tons of coals were still on board. Instead of the 1480 tons which it was predicted the Great Western would have to burn, she took out less than half that quantity (660 tons), of which 450 tons only were consumed! The distance she had run was 3111 nautical miles.

The Great Western having remained a fortnight in harbour, started on her homeward voyage on the 7th of May, when, at the lowest computation, one hundred thousand New Yorkers turned out to witness her departure. Sixty-six passengers had now courage to venture in her. After steaming for exactly a fortnight, and over 3218 nautical miles, she arrived at Bristol on the 22d of May. An immense multitude assembled to welcome her back into the 'king's road,' which they did with tremendous cheers. To show some of the results to be expected from this approximation in point of time of the two continents, one of the passengers, on landing, presented a splendid bouquet of American flowers to the lady of Captain Claxton, the manager of the Great Western Steam Navigation Company. They appeared as fresh as if the dew had been still on them. At a grand dinner of the Bristol citizens two days after, specimens of flax and cotton yarn were exhibited, the raw material of which had been shipped eighteen days previously, and manufactured in a recently-established mill in Bristol.

Thus the great problem of crossing the Atlantic by steam was solved, in spite of the winds, the waves, and the philosophers. 'But this is only one voyage,' said the sceptic; 'let us see the effect of the enormous wear and tear the Great Western will have yet to encounter.' That has been tested, and the result is as follows:—Between the 8th of April 1838, and the 23d of November 1844, she performed seventy passages, in the course of which she had run 256,000 statute miles, at an average speed of

a fraction more than ten miles per hour.* She had conveyed 5774 passengers, besides an immense quantity of goods: she had not been favoured by the weather, that having been in some instances severely stormy: she has not met with any serious accident: yet we learn from the report of a surveyor appointed by government to examine her, and from the frequent reports of the Surveyor-General at Lloyd's, that she is as sound in material, and as perfect in form, as on the day she was launched.

When the practicability of this long voyage was fully established, other vessels were speedily put on the same track. The Sirius, having come back in safety, was replaced on her own station, between London and Cork; but was succeeded by the Royal William, which, however, only made a few voyages, and was likewise placed on another passage. In 1838, a British and American Steam Navigation Company was formed in London, and built a steam-ship of larger dimensions than the Great Western, at an expense of £100,000, calling her the British Queen. Her burthen in tons was 2016. She sailed from Portsmouth on the 12th July 1839, and reached New York in 154 days. Although she performed so well, that in the year 1840 she made five voyages to, and five from, New York, yet, from want of patronage, the company resolved, in 1841, to sell her, which they did to the Belgian government. The vessel which this company built to succeed her brings us to the most melancholy passage that occurs in the history of steam navigation. She was called the President, and registered to carry 2000 tons. In 1840 she made two complete voyages from and back to Liverpool, without any material accident.

In April 1841 the President left New York for Liverpool, with thirty passengers on board, and up to this day no satisfactory intelligence has been received regarding her fate. Her non-arrival at the usual time caused great excitement in this country; and for days and weeks, and even months, it was conjectured that she might have been driven by stress of weather to the Bermudas, or to some other islands in the Atlantic Ocean. Some thought that she might have been forced on the coast of Africa; others that she had been struck by an iceberg; but the general opinion was, after months of anxious expectancy, that she had foundered at sea during the very severe gales which then prevailed. It was remarkable that no vessel had spoken with her on such a well-frequented route as the Atlantic. The only ship that reported having seen any craft like the President was a Portuguese brig, which, on 23d April 1841, while in latitude 31 degrees north and longitude 40 degrees west, or about the middle of the Atlantic, saw a very large steamer under sail, going at the rate of three or four miles an hour. No smoke issued from the funnel, and the paddle-wheels were not in motion. The captain of the brig saw the steamer both on that and the following day, and even approached within three or four miles of her while pursuing his own homeward route. She did not hail the brig, nor did she appear to be at all in a disabled state. A British man-of-war and two Portuguese vessels were sent to cruise in search of the President, but without success; and all hope for her safety was abandoned.

The prevailing conjecture is, that she 'broke her back;' that is, had been severed in the middle in a violent storm which raged while she was at sea, and that she must have sunk bodily at a moment's warning.

A third company was formed in Liverpool, called the Transatlantic Steam Navigation Company, in whose service there are at present five vessels employed to sail between various parts of North America and Liverpool. They are named the Britannia, the Caledonia, the Hibernia, the Cambria, and the Acadia. All these ships were built in the river Clyde, and are of the same model and dimensions; carrying engines of 500 horsepower, and burdens of 1200 tons. To them the government intrusts the transmission of the mails to the United States and Canada, for which it pays the Transatlantic

* Till the year 1849, the Great Western sailed from Bristol; since then, her port of departure has been Liverpool.

Company L.80,000 per annum. Except two rather severe accidents to the Caledonia, which happened respectively in May 1842 and the 2d July 1843, nothing has occurred to these vessels to prevent their regularly fulfilling their engagements to the post-office and the public. They sail twice each month from the beginning of April to the end of November, and once during December, January, February, and March.

Meanwhile, the Great Western continues her voyages, and keeps up her fame, having her glory brightened rather than dimmed by competition with rivals. The spirited company to which she belongs have recently made another bold experiment. They have built an iron ship, which is a hundred feet longer than a first-rate man-of-war, and is propelled without side-paddles. She was named the Great Britain—a visit to her we intend to describe in a succeeding paper.

STRUGGLES OF YOUTH, IN THE CASE OF JAMES CORSON.

It has often been said that an earnest desire, steadily persevered in, is sure to bring about in time its own accomplishment, however improbable such an event may appear at first; and there has perhaps rarely occurred a more striking proof of there being some truth in this remark than in the following history.

It was the earnest wish of James Corson, when a boy of little more than seven years of age, to be a 'doctor' in England; and certainly when the wish was first uttered, there appeared very little prospect of its accomplishment. The father of the boy, who was gardener to a gentleman at Dalscairith, in Dumfriesshire, had a large family, with so small a salary, that he could scarcely spare his boys to attend the parish school; and it was with a heavy heart that 'Jamie' was often compelled to leave his books to attend to the manual labours in which his father found it necessary to employ him. When he was ten years of age, however, a heavier blow fell upon him. His father left Dalscairith, and took a situation in Yorkshire, where, as he found education much dearer than in Scotland, he was no longer able to send James to school. Still, however, the boy remained unshaken in his determination to be a doctor in England; and he spent every leisure moment in poring over his books. His perseverance and his ambition began to attract the notice of the house servants of the gentleman with whom the elder Corson was gardener. He excited a particular interest in the butler, who, being a great favourite with his master, easily obtained permission to take the boy into the family as his assistant. This step, however, at first was the occasion of pain rather than pleasure to James, as his fellow-servants, who had heard of his ambitious desires, never ceased jeering him about them; and indeed the contrast they afforded to his actual situation was sufficiently striking. He was now about fourteen, tall, and well grown for his age, but shy and awkward in his manners, and speaking with a strong Scotch accent, which the Yorkshiremen, though they perhaps speak worse English than is met with in any other county, were particularly severe upon. The jeering of his companions, however, had no other effect on James Corson than to give him another object for his ambition, for he now determined that he would conquer his Scotch accent, and learn to speak pure English, which he did do in the end.

James Corson, during the four years that he remained as assistant to the butler, contrived, with that person's assistance, to perfect himself in writing and accounts; and as he never omitted any opportunity that occurred of acquiring knowledge, he was able, when he left Yorkshire, to take the situation of usher in a school in Wiltshire. Here he stayed two years, during which he learnt Latin and Greek, and the rudiments of French; but as his salary was very small, he took the first opportunity that occurred of removing to Whitehaven, where also he was usher in a school. In both these situations he saved all the money he could, in the hope

that he might at last realise the project that had never once been absent from his thoughts.

At Christmas 1835, James Corson left his situation at Whitehaven, and returned to his father's cottage, previously to visiting London, where he had at last determined to push his fortune. He found, however, upon inquiry, that what he possessed would be nothing in London, and would but barely maintain him there while he was studying as a surgeon, without leaving him any money to pay the fees. This information depressed his spirits exceedingly, and when he returned home, after consulting with a friend at Leeds, he told his father that he began for the first time to fear his wishes never would be accomplished. The elder Corson took in the Gardeners' Magazine; and as it was lying on the table, James listlessly opened it, when his attention was caught by an advertisement for an amanuensis, which had been inserted by Mr Loudon for himself. The countenance of the young man brightened up, and he exclaimed, 'Then I'll see London at last!' His father and friends laughed at him, and argued the improbability of his succeeding in obtaining the situation. But his presentiment had been right; and though Mr Loudon had about a hundred and thirty answers to his advertisement, James Corson's letter was so well expressed, and written in such a manly, yet modest style, that he was preferred. It may easily be conceived that young Corson's delight, when he received Mr Loudon's letter, was beyond description. His father says he was wild with joy.

Mr Loudon at that time was engaged in writing his great work, the *Arboretum Britannicum*; and as he had also three magazines appearing monthly, a great many persons were employed in his office; but of these Mr Corson only became intimate with two; namely, Mr Rauch, a young German, who was one of the draughtsmen, and Mr W. Baxter, son to the curator of the botanic garden at Oxford, who was an amanuensis. Mr Corson's salary was a pound a-week, for which he was engaged in Mr Loudon's office from eight in the morning till six, and he had to find his own lodgings and food, with the exception of some bread and cheese and beer, which all the young men had at one o'clock. Notwithstanding his moderate salary, and the length of time he was occupied every day, young Corson now saw all his wishes on the point of being realised, and he immediately entered a class of students in surgery with a Mr Demott of Charlotte Street, Bloomsbury. He found, however, that, to enable him to pay the fees out of his small salary, it would be necessary for him to practise the most rigid economy; and he accordingly ate nothing but oatmeal porridge, which he made himself, in addition to the very moderate lunch which he ate at Bayswater. To increase his funds, he also took in writing to do at night, after he had finished his medical studies. A very strong constitution, and the most determined perseverance, enabled him to continue these exertions for two years; during the whole of which time he never took a single day's pleasure, or indulged himself with more than four hours' sleep in each night. It may also be added, that during this period, notwithstanding the severity of his medical studies, he never neglected in the slightest degree Mr Loudon's business; and that he always stayed his full time, of from eight till six, in the office at Bayswater, where his indefatigable industry, joined to his quiet and amiable disposition, rendered him a general favourite.

Few young men who have studied surgery under the most favourable circumstances have ever passed their examination with more credit than Mr Corson; and he was even praised by the examining surgeons for the very great care and attention with which he gave his answers. He had now so far attained the long desired object of his ambition, that he was a surgeon in England; but he was at a loss how to turn his newly attained honours to account, as he had no money to purchase a business, or even to fit up a surgery. In this dilemma Mr Rauch, the young German, with whom Mr Corson had formed an acquaintance at Mr Loudon's,

came to his assistance, and detailed the circumstances of the case to a friend, who happened to be a ship-owner. 'I have no interest in the medical line on land,' said this gentleman; 'but if the young Scotchman does not object to the sea, I think I could get him appointed surgeon to a South-Sea whaler; and if he is careful, he may possibly save L.70 or L.100 out of his pay during the three years the ship will be on her voyage, and that will be enough to set him up as a surgeon anywhere.' It may easily be conceived that Mr Corson made no objection to the sea, and, in fact, he sailed with Captain Benson, master of the *Kitty*, in the autumn of 1838.

Up to this time all had gone well with Mr Corson. He had succeeded in everything he undertook; and he had so nearly attained the summit of his ambition, that even those who had laughed at his projects as wild and impracticable, were now compelled to own that all he had wished for lay almost within his grasp. The voyage out of the whaler was also highly successful; and Corson not only fulfilled all the ordinary duties of his situation most satisfactorily, but on one occasion, when a seaman had had his leg lacerated by a shark, he had performed amputation in a masterly manner. Half the voyage had been performed, and they were on their road homeward. Corson had made a collection of plants for Mr Loudon, and of shells, partly for his kind friend Mr Rauch, and partly for Mrs Loudon; and he had, besides, saved upwards of L.70 towards the L.100 he was to accumulate.

The remainder of the tale is soon told. While in the tropics, Mr Corson had occupied himself in clearing the shells he had collected from the animals they contained; and from fatigue, or perhaps from the noxious effluvia evolved by the decaying animals, he was taken ill of fever, which carried him off in fourteen days. He died on the 16th of June 1841, in the twenty-seventh year of his age, a striking illustration of what may be done by industry and perseverance.

[It will be understood that the proceedings here detailed are not held up as an example to be followed, but only as a remarkable instance of the pursuit of knowledge under difficulties. Mr Corson's application to duty and study was so far beyond what our natural powers justify, that it is surprising he did not sink under it. His not doing so may be attributed to an unusually vigorous constitution. All ordinary endowed persons must be in the greatest danger from such over-taskings; and even of those who are constituted most favourably, the greater number would fail to survive such a course as that passed through by Mr Corson while studying for his profession.—Ed.]

ORIGIN OF THE TERM 'MERRY ANDREW.'

This term, with which every child out of the nursery is so familiar, and which is inseparably associated with his ideas of grins, grimaces, and humorous sayings, has a much more exalted origin than many may suppose. The medical profession, which has given rise to more nicknames and slang phrases than almost any other, has the paternity of this one also to answer for. During the time of Henry VIII., Edward VI., and Queen Mary, there lived and practised as a physician in London one Andrew Borde, who to his vast learning and knowledge of foreign parts, added the most whimsical and facetious characteristics. This individual was originally a Carthusian monk, but the severities of the order being rather inconsistent with his irrepressible propensity to humour, he abandoned the brotherhood, and betook himself to physic. After travelling the European continent and some parts of Africa, he settled in the metropolis, where he became a physician to Henry VIII., and author of several works on medicine, poetry, and literature. 'He was a man,' says a contemporary, 'and of a whimsical head; he frequented fairs and markets, and harangued the populace in public; he made humorous speeches, couched in such language as caused mirth, and wonderfully propagated his fame.' From his use of such speeches at markets and fairs, he came to be better known as Merry Andrew than as Dr Borde; and thus those who in after times imitated the same humorous jocose language were styled

'Merry Andrews.' Though weak in these respects, he is otherwise acknowledged to have been a learned man, a good poet, and perhaps the best physician of his time. He was the author of the *Merry Tales of the Wise Men of Gotham*; the *Introduction to Knowledge*, a poem; the *Miller of Abingdon*; the *Principles of Astronomical Prognostications*; the *Doctrine of Health*; the *Promptuary of Medicine*; a book of jests; and other pamphlets. Dr Borde died a prisoner in the Fleet, April 1549; yet, it is said, not for debt, as he left considerable inheritance behind him. The conduct of Merry Andrews conveys to us certainly no very exalted notion of the medical profession three hundred years ago; though, all other progress considered, it was not then one whit more degraded by Borde and his brethren with their mountebanks, than it is now by the quacks and pill venders who batten on the credulity of the public.

AN AVIARY ON A GREAT SCALE.

It is a pleasing thing to witness, says a correspondent of the *Zoologist* for March, the confidence and familiarity of the nightingale when protected; as, for instance, in the promenade at Gradenfeld, in Prussia, a beautiful planted piece of ground, extending nearly a quarter of a mile along both banks of a small stream. In addition to the penalties denounced by Prussian law against those who rob the nests of the nightingale, a watchman is stationed here during the breeding season for additional security. This may perhaps appear singular in our matter-of-fact age; but I am confident that no lover of nature who had resided in Gradenfeld, and enjoyed the delicious concerts which these birds maintain both day and night, except from about two to five o'clock P.M., would refuse his aid to such a custom. Many a bird-fancier is at much greater expense, not to speak of trouble, in keeping a ghost of a nightingale caged, and why should we wonder at the inhabitants of Gradenfeld, with their open-air habits, taking care that their favourite resort shall never become songless? Seated on a broad-leaved jessamine, the shrub which generally conceals the nest, the male bird will sing although you pass within four feet of him, eyeing you as if perfectly aware that he is a privileged character. Besides the nightingales, a great variety of other birds find shelter in this privileged place, and being never molested, afford the naturalist excellent opportunities of observing their habits. Amongst others, the hoopoes generally build here; the golden oriole suspends its curious nest from the highest branches of the aspen, and breathes out its cheerful flute-notes at evening; the Bohemian wax-wing is a regular and plentiful winter visitant; whilst a variety of finches and warblers of less note complete this real 'happy family.'

THE TWO ROSES.

Being with my friend in a garden, we gathered each of us a rose. He handled his tenderly; smelt it but seldom, and sparingly. I always kept mine to my nose, or squeezed it in my hand, whereby in a very short time it lost both its colour and sweetness; but his still remained as sweet and fragrant as if it had been growing upon its own root. These roses, said I, are the true emblems of the best and sweetest creature enjoyments in the world, which, being moderately and cautiously used and enjoyed, may for a long time yield sweetness to the possessor of them: but if once the affections seize too greedily upon them, and squeeze them too hard, they quickly wither in our hands, and we lose the comfort of them; and that either through the soul surfeiting upon them, or their just removal, because of the excess of our affections to them. It is a point of excellent wisdom to keep the golden bridle of moderation upon all the affections we exercise on earthly things.—*Flavel*.

UNION.

Science, the partisan of no country, but the beneficent patroness of all, has liberally opened a temple where all may meet. Her influence on the mind, like that of the sun on the chilled earth, has long been preparing it for higher cultivation and further improvement. The philosopher of one country sees not an enemy in the philosopher of another: he takes his seat in the temple of science, and asks not who sits beside him.

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